

CLAIMS

What is claimed is:

1) A virtual remote touching system, for enabling a broadcasting user to transmit tactile characteristic information to a receiving user, comprising:

at least one sensing broadcasting unit, capable of sensing the broadcasting user's tactile characteristics and creating electronic simulation data of said characteristics;
a transmitting system for sending said electronic simulation data from said sensing broadcasting unit to a receiving device;

at least one receiving simulating unit, capable of receiving electronic simulation data, such that an engaging receiving user can touch the simulated tactile characteristics of the broadcasting user.

2) The virtual remote touching system of claim 1, wherein the simulation data is electronically transmitted between the broadcasting unit and receiving unit by using the Internet.

3) The virtual remote touching system of claim 1, wherein the simulation data stream is electronically exchanged between the broadcasting unit and the receiving unit using a real-time Internet application, such that the receiving user can instantly touch simulated tactile characteristics of the broadcasting user.

4) The virtual remote touching system of claim 1, wherein said sensing broadcasting unit comprises a broadcasting device, a base, at least one sensor, and a data acquisition device.

09373476-060404

09073476 060401

5) The virtual remote touching system of claim 4, wherein said broadcasting device engageably receives at least one body part from said broadcasting user,

said at least one tactile detecting sensor is connected to the broadcasting device, so as to detect selected characteristic data of the at least one engaging body part,

said broadcasting device generates an indicating signal, and said indicating signal is received by said data acquisition device.

6) The virtual remote touching system as in claim 1, wherein said simulating unit comprises a processing system, a controller, a receiving device, a base, an at least one sensor and said receiving device is configured to engageably receive an at least one interfacing body part from said receiving user.

7) The virtual remote touching system of claim 6, wherein said at least one sensor is connected to said broadcasting device for detecting selected tactile characteristic data of said at least one engaging body part.

8) The virtual remote touching system of claim 7, wherein said data acquisition device receives a signal from a connected at least one sensor and transmits said information to said transmitting system.

9) The virtual remote touching system of claim 8, wherein said at least one sensor is a temperature sensor for detecting the temperature of the broadcasting user's at least one engaging body part and relaying an indicating signal to said data acquisition device.

10) The virtual remote touching system of claim 8, wherein said at least one sensor is a moisture sensor for detecting the moisture of the broadcasting user's at least one engaging body part and relaying an indicating signal to said data acquisition device.

11) The virtual remote touching system of claim 8, wherein said at least one sensor is a surface sensor, for detecting the roughness characteristic of the at least one engaging body part and relaying an indicating signal to said data acquisition device.

12) The virtual remote touching system of claim 8, wherein said at least one sensor is a hardness sensor, for detecting the hardness of the at least one engaging body part and relaying an indicating data signal to said data acquisition device.

13) The virtual remote touching system of claim 12, wherein an at least one tactile detecting sensor cooperatively engages said receiving device, such that said detecting sensor sends an indicating data signal to said controller,

wherein said controller receives said indicating signal and compares data received from said indicating signal to received electronic simulation data.

14) The virtual remote touching system of claim 12, wherein receiving device is comprised of a synthetic polymeric material.

15) The virtual remote touching system of claim 12, wherein said at least one sensor is a temperature sensor for detecting the temperature of the receiving device and relay an indicating signal to said controller.

09873476.060401

16) The virtual remote touching system of claim 12 wherein said at least one sensor is a moisture sensor for sensing the moisture content of the receiving device and relaying an indicating signal to said controller.

17) The virtual remote touching system of claim 12 wherein said at least one sensor is a hardness sensor for detecting the hardness of the inner surface of the receiving device and relaying an indicating signal to said controller.

18) The virtual remote touching system as in claim 12 wherein said receiving interface has a hand shaped configuration.

19) The virtual remote touching system as in claim 12 wherein said receiving interface has lip-like shaped configuration.

20) The virtual remote touching system as in claim 15, further comprising a moisturizing element in connective association with said receiving device, such that a signal from said controller causes the moisturizing element to create moisture into said receiving device.

21) The virtual remote touching system as in claim 12, further comprising a moisture removing apparatus,

said moisture removing apparatus is electronically connected to said controller, such that when said controller sends a controlling signal to said moisture-removing apparatus, said moisture removing apparatus blows drying air in the direction of the receiving device to remove moisture from the receiving.

22) The virtual remote touching system as in claim 12, further comprising a temperature regulating apparatus,

said temperature apparatus is electronically connected to said controller, such that when said controller sends a controlling signal to said temperature regulating apparatus, said apparatus increases or decreases the temperature of the interfacing device.

23) The virtual remote touching system as in claim 12, wherein interfacing device is comprised of a flexible polymer that is capable of responsively deforming in response to a controlling signal, thereby creating a simulation of the texture if the broadcaster's engaging body part.

/24) A tactile sensing unit, for sensing an engaging user's tactile characteristic data of a user; comprising:

an interfacing device;

an at least one sensor for detecting tactile data of an engaging user and sending an indicating signal;

a data acquisition apparatus for receiving said indicating signal from said at least one sensor.

25) The tactile sensing unit of claim 24, wherein the sensing unit is a transmitting unit, comprising a broadcasting device, a base, an at least one sensor, and a data acquisition device;

wherein said broadcasting device engageably receives said at least one body part from said broadcasting user;

wherein said at least one sensor is connected to said broadcasting device, to detect tactile characteristic data of at least one engaging body part and creating an indicating signal to be received by said data acquisition device.

26) The tactile sensing unit of claim 24,
wherein said at least one sensor is a temperature
sensor for detecting the temperature of the broadcasting
user's at least one engaging body part and relaying an
indicating signal to said data acquisition device.

27) The tactile sensing unit of claim 24 wherein at
least one sensor is a moisture sensor for detecting the
moisture of the broadcasting user's at least one engaging
body part and relays an indicating signal to connect said
data acquisition device.

28) The tactile sensing unit of claim 24, wherein at
least one sensor is a hardness sensor that detects the
hardness of the at least one engaging body part and relays
an indicating signal to said data acquisition device.

29) The tactile sensing unit of claim 24, wherein at
least one sensor is a movement sensor capable of detecting
the movement or vibration of the engaging body part and
relaying an indicating signal to said data acquisition
device.

30) The tactile sensing unit of claim 24, wherein the
interfacing device has a hand-shaped configuration for
engagement with an interfacing user's hand.

31) The tactile sensing unit of claim 24, wherein the
interfacing device has a lip-shaped configuration shape for
engagement with an interfacing user's lips.

32) The tactile sensing unit of claim 24,
wherein said tactile sensing device is a simulating
unit for receiving tactile data from a source,

wherein said simulating unit comprises a receiving device, a base, an at least one sensor, a data processing system and a controller,

wherein said data processing system receives electronic tactile simulation data from a remote source,

wherein said at least one sensor detects selected tactile characteristics and sends a tactile indicating data signal to said controller,

wherein said controller compares said electronic tactile simulation data to that of received tactile indicating data and sends a generating signal to an at least one selected regulating apparatus.

33) The tactile sensing unit of claim 30, wherein said at least one sensor is a temperature sensor for detecting the temperature of the receiving user's said at least one engaging body part and relays an indicating data signal to said controller.

34) The tactile sensing unit of claim 30, wherein said at least one sensor is a moisture sensor for detecting the moisture of the receiving user's said at least one engaging body part and relays an indicating data signal to said controller.

35) The tactile sensing unit of claim 30, wherein said at least one sensor is a surface sensor, for detecting the roughness characteristic of receiving user's said at least one engaging body part and relaying an indicating data signal to said controller.

36) The tactile sensing unit of claim 30, wherein a hardness sensor detects the hardness of receiving user's said at least one engaging body part and relays an indicating data signal to said controller.

37) The tactile sensing unit of claim 30, wherein a vibration sensor detects the movement of the receiving user's said at least one engaging body part and relays an indicating data signal to said controller.

38) The tactile sensing unit of claim 30, wherein said regulating device is a moisture regulator adjacent to said interfacing device, comprised of a moisturizing element reactive to heat such that when heated the moisturizing element releases moisture.

39) The tactile sensing unit of claim 30, wherein said interfacing device is comprised of a flexible polymer that responsively deforms responsive to a signal, thereby forming the texture of a broadcaster's engaging body part:

40) The tactile sensing unit of claim 29, wherein said interfacing device is connected to a temperature regulating device such that the surface temperature of the interfacing device can be controlled to simulate the temperature of the broadcasting user's engaging body part.

✓/ 41) A method for enabling users to remotely virtually touch, comprising the steps of:

providing a broadcasting-sensing unit comprising an interfacing device capable of receiving a broadcasting user's interfacing body part and sensing tactile characteristics of the body part;

positioning the interfacing body part into an engaging position with the interfacing device, such that the interfacing device can detect tactile characteristics of the interfacing body part;

detecting tactile characteristics of the broadcasting user's interfacing part, such that a data signal containing the detected simulation data is generated;

09073476 060401

providing a data acquisition device capable of receiving the data signal and converting the signal into an electronic data form;

transferring the data signal to the data acquisition board;

converting the signal into transferable simulation data stream;

transferring the simulation data stream to a transmitting device;

providing a receiving-simulating unit having a receiving interface, capable of receiving data and converting the simulation data into a tactile simulation, such that a receiving user can touch simulated tactile qualities of the broadcasting user;

transmitting the simulation data to the receiving-simulating unit having a controller capable of converting the data into indicating electronic signals;

positioning the receiving user's body part in an associated engagement with the receiving-simulating interface;

providing a simulating device capable of simulating tactile characteristics;

converting the simulation data into an indicating signal and transmitting the indicating signal to the simulating device;

wherein, when a broadcasting user positions his body part in touching engagement with the broadcasting unit, electronic simulation data is generated and transmitted to a simulating unit having simulation devices, such that a receiving user who engages the simulating unit can feel a simulation of the touch of the broadcasting user.

09073475 060401